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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,220	12/09/2003	Michael J. Sailor	0321.68542	4581
24978	7590	07/20/2007		
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			EXAMINER GELLNER, JEFFREY L	
			ART UNIT 3643	PAPER NUMBER
			MAIL DATE 07/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,220

Applicant(s)

SAILOR ET AL.

Examiner

Jeffrey L. Gellner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14, 15 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) 4-7, 10, 12, 27 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15 and 17-26 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 3, 11 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Upon reconsideration, the Examiner withdraws the statement in the interview of 6 April 2007 (interview summary mailed 12 April 2007) that common ownership of the instant application with Simpson et al. precludes use of the Simpson et al. reference (US 6,666,935 B1) as prior art under 35 USC 102(e). As Applicants correctly and implicitly argue in there Amendment, received 7 May 2007, common ownership precludes use of the Simpson et al. reference as 25 USC 103(a) art (see MPEP 706.02(I)(1)(I)).

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Simpson et al. (US 6,666,935 B1).

As to claims 1, 2, and 8, Simpson et al. discloses an initiator explosive device (abstract) for detonating a second explosive (capable of this use) comprising a nanocrystalline silicon having a plurality of pores disposed therein ("silica matrix" of col. 7 lines 23-26; col. 5 lines 35-40); and, a solid state oxidant ("PETN" of col. 7 lines 45-50) disposed within the pores (col. 7 lines 45-50).

As to claim 9, Simpson et al. further discloses the oxidant baked into the pores (from col. 7, lines 52-57).

Allowable Subject Matter

Claims 14, 15, 17-26 are allowed.

Claims 3, 11 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's argument filed 7 May 2007 have been fully considered but they are not persuasive. Applicants' argument is that Simpson et al.'s composition is a "silicon aerogel" while the instant invention is a "porous nanocrystalline silicon," and since these two compositions are different structures with different properties and formed by different processes, one of ordinary skill in the art would not equate the two (Remarks pages 7-9).

Applicant sites several sources for the definitions of aerogel and porous silicon at pages 7 and 8 of the Remarks. Examiner does not find these definitions to be dispositive because "[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow" (MPEP 2111.01(I) citing *In re American Academy of Science Tech Center*). However, "[t]he broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach" (MPEP 2111 citing *In re Cortright*). Further, "the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification" (MPEP 2111.01(I) citing *In re Zletz*).

Applicants in their specification on page 5, lines 21-23, state that "[t]he nanocrystalline silicon is porous and behaves similarly to a sponge with nanometer-size holes. The solid state

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oxidant is absorbed into these holes, and my subsequently be baked into the nanocrystalline silicon.” Applicants further state that the “porous nanocrystalline silicon may assume a variety of forms” at page 3, lines 31-32. Simpson et al. state that they used “sol-gel technology to compose the solid skeleton out of a fuel while trapping the oxidizer within the pores or vice versa” (Simpson et al. at col. 8 lines 61-63). Hence Simpson et al.’s composition is akin to a sponge with the pores filled with oxidizer. One of ordinary skill would consider the composition of Simpson et al. to be within the ambit of porous nanocrystalline, especially since both compositions possess the attribute of detonation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'J. L. Gellner', with a stylized flourish at the end.

Jeffrey L. Gellner
Primary Examiner
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